

53654 E/26 TANABE SEIYAKU KK 11.11.80-JP-159206 (22.05.82) A61k-09/10	B07 (B04)	TANA 11.11.80 *J57082-310	B(4-B1B, 5-B1P) 2	136
Liposome preparations prodn. - by dispersing phospholipid in aq. medium, dissolving drug in dispersion, freeze drying and re dispersing in aq. medium			<p>The aq. medium is pref. water, saline, buffer (phosphate, citrate etc.), aq. saccharides (glucose, sorbitol etc.).</p> <p>The drug may be normal drugs such as diltiazem, propranolol, glutathione etc., vitamins, enzymes, hormones, antibiotics etc.</p> <p>The phospholipid is used at 0.01-0.3 wt. pt. per wt. of the aq. medium. 5-100 wt. pt. of the phospholipid is used per wt. pt. of the drug.</p>	
Liposome preps. are produced by (a) dispersing phospholipid in an aq. medium, (b) dissolving a drug in the dispersion, (c) freeze-drying the resulting dispersion containing the drug, and (d) re-dispersing the freeze-dried product in an aq. medium.			<p>EXAMPLE</p> <p>50g yolk phospholipid was dispersed in 0.05M tris HCl buffer (pH 8) (800 ml). 100g of mannitol was added and the total volume was adjusted to 1 l. This crude dispersion was homogenised on a high pressure emulsifier at 450 kg/cm², and filtered hot through a membrane filter of 0.45 µm to obtain a dispersion (A).</p> <p>800 ml. of L-asparaginase solution (2000 IU/ml) was added to 800 ml. of (A). The mixt. was put into 2 ml. vials and freeze-dried at -40 to -45°C and 0.03-0.09 Torr (16 hrs.) to obtain a freeze-dried product (B).</p> <p>2 ml. of distilled water was added to one vial of (B) and shaken to obtain a liposome dispersion contg. L-asparaginase (37.4%).(4ppW119)</p>	
ADVANTAGES/USES			J57082310	
Prior art methods for incorporating drugs into liposome involve use of organic solvents (e.g. chloroform, ether, t-butanol) and hence there is a risk that the products still contain residual solvents. This process is free from such a risk. Uses are pharmaceutical preparations, e.g. oral, injectable, suppository forms etc.				
DETAILS				
The phospholipid used is e.g. phosphatidyl choline, phosphatidyl ethanolamine, phosphatidyl inositol etc.; owolecithin, soybean lecithin etc.; synthetic ones such as dipalmitoyl lecithin etc.				